CLAIMS

What is claimed is:

1. (Original) A method of adjusting the power headroom in a mobile station, comprising:

receiving a load indication from a base station indicative of a reverse link load; and

adjusting the power headroom of the mobile station based on the load indication.

2. (Original) The method of claim 1 wherein receiving a load indication from a base station comprises receiving the load indication in an upper layer message.

3. (Original) The method of claim 2 wherein the upper layer message is received over a common control channel.

4. (Original) The method of claim 1 wherein receiving a load indication from a base station comprises receiving a periodic load indication.

5. (Original) The method of claim 4 further comprising filtering the periodic load indications received over two or more periods to generate a filtered load estimate.

6. (Original) The method of claim 5 wherein adjusting the power headroom of the mobile station based on the load indication comprises adjusting the power headroom as a function of the filtered load estimate.

7. (Original) The method of claim 4 further comprising calculating a load tracking value based on two or more periodic load indications.

8. (Original) The method of claim 7 wherein calculating a load tracking value based on two or more periodic load indications comprises calculating a weighted average of two or more periodic load indications.

9. (Original) The method of claim 7 wherein calculating a load tracking value based on two or more periodic load indications comprises calculating a running average of two or more periodic load indications over a sliding time window.

10. (Original) The method of claim 7 wherein calculating a load tracking value based on two or more periodic load indications comprises evaluating a continuous load tracking function that converts discrete periodic load indications from the base station to a continuous load tracking value.

11. (Original) The method of claim 7 wherein adjusting the power headroom of the mobile station based on the load indication comprises determining the power headroom threshold as a function of the load tracking value.

12. (Original) The method of claim 11 wherein determining the power headroom threshold as a function of the load tracking value comprises adjusting the power headroom threshold linearly based on changes in the load tracking value.

13. (Original) The method of claim 11 wherein determining the power headroom threshold as a function of the load tracking value comprises adjusting the power headroom threshold non-linearly based on changes in the load tracking value.

14. (Currently amended) A mobile station comprising:

a receiver for receiving a load indication from a base station;

a transmitter for transmitting signals to the base station at a variable data transmission rate dependent on the load indication; and

a controller to vary a power headroom threshold for the transmitter based on the load indication from the base station.

15. (Original) The mobile station of claim 14 wherein the power headroom threshold limits the data transmission rate of the mobile station.

16. (Original) The mobile station of claim 14 wherein the load indication is received from the base station in an upper layer message.

17. (Original) The mobile station of claim 14 wherein the load indication is a periodic load indication.

18. (Original) The mobile station of claim 17 wherein the controller calculates a load tracking value based on two or more periodic load indications and determines the power headroom threshold as a function of the load tracking value.

19. (Original) The mobile station of claim 18 wherein calculating a load tracking value based on two or more periodic load indications comprises calculating a weighted average of two or more periodic load indications.

20. (Original) The mobile station of claim 18 wherein calculating a load tracking value based on two or more periodic load indications comprises calculating a running average of two or more periodic load indications over a sliding time window.

21. (Original) The mobile station of claim 18 wherein calculating a load tracking value based on two or more periodic load indications comprises evaluating a continuous load tracking function that converts discrete periodic load indications from the base station to a continuous load tracking value.

22. (Original) The mobile station of claim 18 wherein the controller adjusts the power headroom threshold linearly based on changes in the load tracking value.

23. (Original) The mobile station of claim 18 wherein the controller adjusts the power headroom threshold non-linearly based on changes in the load tracking value.

24. (Original) A method of adjusting the power headroom in a mobile station comprising:

counting the number of times the mobile station is power limited for a retransmission of a frame; and

adjusting a power headroom threshold of the mobile station based on the count.

25. (Original) A mobile station comprising:

a transmitter for transmitting signals to the base station at a variable data transmission rate;

a power outage counter for counting the number of times that the mobile station is power limited for a retransmission of a frame; and

a controller to vary a power headroom threshold of the mobile station based on the count.